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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/937,639   | 09/25/2001  | Mark Kevin O'Connor  | 146381.00001        | 2501             |
| 7590 SIDLEY AUSTIN BROWN & WOOD LLP<br>1501 K STREET, N.W.<br>WASHINGTON, DC 20005 |             |                      | EXAMINER<br>HAN, QI |                  |
|  |             |                      | ART UNIT<br>2626    | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE   | MAIL DATE   | DELIVERY MODE        |                     |                  |
| 3 MONTHS   | 02/05/2007  | PAPER                |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                 |                      |
|------------------------------|-----------------|----------------------|
| <b>Office Action Summary</b> | Application No. | Applicant(s)         |
|                              | 09/937,639      | O'CONNOR, MARK KEVIN |
|                              | Examiner        | Art Unit             |
|                              | Qi Han          | 2626                 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 November 2006.  
 2a) This action is FINAL. 2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 105-116 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 105-116 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 25 September 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

#### ***Response to Amendment***

3. This communication is responsive to the applicant's amendment and RCE examination both filed on 11/22/2006. The applicant(s) cancelled all previous presented claims (1-104) and added new claims 105-116 (see the amendment: pages 3-8).

#### ***Response to Arguments***

4. Applicant's arguments with respect to the claim rejection under 35 USC 102/103 (see the amendment: page 11) have been considered but are moot in view of the new ground(s) of rejection (see below), since the applicant cancelled all previous presented claims and added new claims.

*Drawings*

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitation “re-convert the at least one processed text into the standard text by employing the electronic markers...” in claim 108 and the similar limitation in claim 113 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 105-116 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 105, it claims “a computer-based text processor and display system”, which appears, in surface, to fall within statutory classes (i.e. a machine). However, by reviewing the body of the claim, the claim, as whole, is substantially drawn to an arrangement or manipulation of pure data (text data), i.e. an abstract idea, which falls within 35 USC 101 Judicial Exceptions. It is noted that even though the claim includes elements “a pronouncing-dictionary data-base”, “a converter” and “display means”, the claimed invention, as whole, is nothing more than merely arranging and/or manipulating pure data within a computer-based system, without input and output (result) incorporated with any practical applications, which is an abstract idea in nature. It is also noted that the claimed elements may change forms (or types) of the manipulated data (text data), but, since the data is not physical “thing”, the different forms (or types) of data manipulated is still in the same scope of “pure data” and the processing for the changes is still in the scope of “arrangement of pure data”. Further, since the claim only involves or manipulates an abstract idea (arrangement of pure data) and the result is still in scope of abstract idea (arranged pure data), it would not produce a useful, tangible, and concrete result in a practical application. Therefore, the claim, as whole, is directed to non-statutory subject matter.

Regarding claims 106-109, the rejection is based on the same rationale described for claim 105, because the claims include the same or similar problematic limitation(s) as claim 105.

Regarding claim 110, it claims “a method”, which appears, in surface, to fall within statutory classes (i.e. a process). However, by reviewing the body of the claim, the claim, as whole, is substantially drawn to an arrangement or manipulation of pure data (text data), i.e. an abstract idea, which falls within 35 USC 101 Judicial Exceptions. It is noted that even though the claim includes limitations “a pronouncing-dictionary data-base” and “enabling the user to display”, the claimed invention, as whole, is nothing more than merely arranging and/or manipulating pure data without input and output (result) incorporated with any practical applications, which is an abstract idea in nature. It is also noted that the claimed elements may change forms (or types) of the manipulated data (text data), but, since the data is not physical “thing”, the different forms (or types) of data manipulated is still in the same scope of “pure data” and the processing for the changes is still in the scope of “arrangement of pure data”. Further, since the claim only involved or manipulated an abstract idea (arrangement of pure data) and the result is still an abstract idea in nature (arranged pure data), it would not produce a useful, tangible, and concrete result in a practical application. Therefore, the claim, as whole, is directed to non-statutory subject matter.

Regarding claims 111-116, the rejection is based on the same rationale described for claim 110, because the claims include the same or similar problematic limitation(s) as claim 110.

7. To expedite a complete examination of the instant application the claims rejection under 35 U.S.C 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 105-106, 108 and 113 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Regarding claim 105, the claimed limitation “a converter adapted to convert ...into...by adding ...from ...to...to the pronunciation of ...” appears to have a grammatical error and it is unclear what exact meaning of the limitation is, so as being indefinite.

Regarding claim 106, it is confused and unclear that what difference between “phonetically enriched text” and “non-standard processed texts” really is. It appears that the two claimed texts are substantially same because both are “by adding phonetic information with word-shapes in the standard text” (see elements 2 of this claim and claim 105). Therefore, the limitations are treated as being indefinite.

Regarding claim 108, the claimed limitation “homophonous homonyms in which **word-shapes that differ by spelling** have the same pronunciation” conflicts with common meaning of the terms “homophonous homonyms” (same spelling, same pronunciation, different meaning) in the art and the applicant’s own definition (see paragraph 69 of the specification), so that the limitation is indefinite.

As per **claim 113**, the rejection is based on the same reason described for claim 108, because the claim recites the same or similar problematic limitations as claim 108.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claim 108 and 113 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 108, since the claimed limitation “homophonous homonyms in which **word-shapes that differ by spelling have the same pronunciation**” conflicts with common meaning of the terms “homophonous homonyms” (same spelling, same pronunciation, different meaning) in the art and the applicant’s own definition (see paragraph 69 of the specification), the further claimed limitation “electronic markers indicate the spelling of ...of the standard text that are the homophonous homonyms” is meaningless. Further, the last limitation “re-convert the at least on processed text into the standard text by employing the electronic markers ...” is not operable because the markers indicating the spelling of the word-shapes of the standard text are not sufficient for the re-conversion. Therefore, the claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and/or use the claimed invention, without undue effort.

As per **claim 113**, the rejection is based on the same reason described for claim 108, because the claim recites the same or similar problematic limitations as claim 108.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 105-3, 5, 19-21 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by COLLINS et al. (US 5,594,642) hereinafter referenced as COLLINS.

As per **claim 105**, as best understood in view of the rejection under 35 USC 101 and 112, 2<sup>nd</sup> (see above), COLLINS discloses ‘a method and system for assisting input information’ (abstract) with computer-based environment having display device (Fig. 1 and col. 3, lines 18-38), wherein the mechanism of handling process of text input, text editing and converting (col. 4, lines 42-45) is corresponding to claimed “the text processor”, comprising:

“a pronouncing-dictionary data-base in which word-shapes of the standard text are matched with information indicative of the pronunciation of said word-shapes” (col. 6, lines 21-23, ‘the main dictionary plus one or more user dictionaries (corresponding to a pronouncing-dictionary data-base)’; col. 8, lines 9-30, ‘interchangeable dictionaries (dictionary data-base)’, ‘Chinese dictionary with or without tones’ that provides Pinyin (phonetic text of Chinese), wherein the Pinyin text without tones (only using normal English letters) is interpreted as standard text; also see Fig. 7c),

“a converter adapted to convert the standard text into a plurality of non-standard processed texts by adding information from the data-base to the standard text in the form of phonetic clues [to the pronunciation of word-shapes in the standard text] so that the non-standard processed texts differ one from another by the amount of said phonetic clues in each

processed text”, (col. 8, 29-30, wherein the Pinyin term ‘beijing’ is converted to ‘bei3jinag1’ and ‘bei4jing3’ that are read on “a plurality of non-standard processed texts”, and Pinyin term itself and the different tone markers represented by digits are read on “phonetic clues”; in addition, Fig. 2, ‘fake logograph’ can also be broadly interpreted as “non-standard processed texts” by translation (conversion) from other text, such as Chinese or English text),

“display means enabling the user to display the standard text and each of said processed texts”, (Fig. 1 and col. 3, lines 35-38, ‘a display adapter 36 connecting the bus to a display device 38’; col. 4, lines 45-63, ‘text is displayed in the active area’; ‘there are a number of different kinds of text on the screen (display): confirmed text...converted text... raw text (necessarily and/or inherently including displaying phonetic text, such as pinyin)').

As per **claim 109** (depending on claim 105), COLLINS further discloses that “the standard text employs alphabetic letters and a letter order that accords with a convocation spelling system of the natural language, the processed texts have the alphabetic letters and spelling of the standard text, and the display means is adapted to make visible said phonetic clues in the processed texts as variations in the visual appearance of the letters of word-shapes in the processed texts as displayed (Fig. 7c and col. 8, lines 18-30; col. 4, lines 45-63; wherein the display device necessarily and/or inherently includes displaying phonetic text, such as pinyin that uses alphabetic letters and has a letter order of spelling).

As per **claim 110**, it recites a method. The rejection is based on the same reason described for claim 105, because the claim recites the same or similar limitations as claim 105.

As per **claim 115** (depending on claim 110), the rejection is based on the same reason described for claim 109, because the claim recites the same or similar limitations as claim 109.

***Claim Rejections - 35 USC § 103***

11. Claim 106-78, 83, 85, 90, 92-93 and 98 is rejected under 35 U.S.C. 103(a) as being unpatentable over COLLINS in view of GEORGE (US 5,832,478).

As per **claim 106**, as best understood in view of the rejection under 35 USC 101 and 112, 2<sup>nd</sup> (see above), the rejection is based on the same reason described for claim 105 because the claim recited the same or similar limitations as claim 105, except the limitation of “convert the standard text into a **phonetically enriched text** … said enriched text thereby comprising the standard text with said phonetic clues therein”. However, this feature is well known in the art as evidenced by GEORGE who discloses ‘method of searching an on-line dictionary using syllables and syllable count’ (title), comprising on-line dictionary, each entry of the dictionary includes multiple phonetic texts (Figs. 2-3 and col. 6, lines 1-22), which correspond to the claimed “phonetically enriched text”. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the normal electronic dictionary (database) can be implemented in the same way as the on-line dictionary, and to modify COLLINS by providing multiple phonetic texts for a dictionary entry, as taught by GEORGE, for the purpose (motivation) of improving the effectiveness of text search of dictionaries (GEORGE: col. 3, lines 46-47).

As per **claim 111**, it recites a method. The rejection is based on the same reason described for claim 106, because the claim recited the same or similar limitations as claim 106.

As per **claim 114** (depending on claim 110), as stated in claim 105 (also applied to claim 110), COLLINS has capability of displaying multiple texts (including in successive manner)

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display) (Figs. 5 and 7), but COLLINS does not expressly disclose “there are **at least two processed texts**” in succession. However, the feature of providing multiple processed texts in succession well known in the art as evidenced by GEORGE who discloses ‘method of searching an on-line dictionary using syllables and syllable count’ (title), comprising on-line dictionary, comprising on-line dictionary, each entry of the dictionary includes multiple phonetic texts (Figs. 2-3 and col. 6, lines 1-22), which correspond to the claimed “at least two processed texts”. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the normal electronic dictionary (database) can include multiple phonetic texts in succession as the same way as on-line dictionary, and to modify COLLINS by providing successive multiple phonetic texts for a dictionary entry, as taught by GEORGE, for the purpose (motivation) of improving the effectiveness of text search of dictionaries (GEORGE: col. 3, lines 46-47).

### *Conclusion*

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: [ebc@uspto.gov](mailto:ebc@uspto.gov). For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh

January 29, 2007

 1/29/07